## REMARKS

Applicants have carefully reviewed the Office Action dated June 20, 2005. Claims 1-6 remain for examination in the application and Claims 8-13 remain withdrawn. Applicants have amended Claims 1 and 3 and have added new claims 14 - 18. Reconsideration and favorable action is respectfully requested.

The Abstract of the Disclosure is rejected to because the current Abstract does not reflect the inventive feature of the claimed invention to distinguish over the prior art. This Abstract has been corrected.

Claims 1-6 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner has pointed out a number of aspects that lack antecedent basis. These have been corrected in the claims. The Examiner has also queried as to the nature of the functionality of the "functional input/output block," as the Examiner does not believe that this is clear. The claims have been amended to further clarify that the functionality is basically where the output of a functional block is a function of the input, this being a predetermined function, which function can be modified by the processor as such, with the clarificational language, Applicant believes that Claims 1-6 now overcome the 35 U.S.C. §112 rejection, the withdrawal of which is respectfully requested.

Claims 1-6 stand rejected under 35 U.S.C. §103(a) as being obvious over *Cheung et al.* in combination with *Allen et al.* This rejection is respectfully traversed with respect to the amended claims.

As described in previous responses, the *Cheung et al.* reference is a reference that provides a switch that is operable to receive as one input thereto the output of a functional module. The functional module is operable to interface on one side, the input side, with the pins of the chip and on the other side with pins of the switch. The switch is operable to, in one mode, interface one functional module with another functional module, where the other functional module would have the output interfaced with a pin and the input interfaced with the switch. Figs. 2a and 2b illustrate that the functional module is interfaced with the external circuit through the

switch. In another embodiment, the functional modules are illustrated as interfacing with each other, this described as being for the purpose of test connections. This is illustrated in Fig. 3 with reference to connection 83 which connects two external circuits together and with connections 81 and 82 which connect two internal functional modules together. However, each functional module has some type of input and some type of output and the function provided thereby is basically where the output is a function of the input. Each of the functional modules must be interfaced with either an external circuit or another functional module via the switch. Each of the functional modules is independent of each other and the configuration circuit (45) is the aspect that controls such configuration.

In Applicant's present inventive concept, as described by the amended claims, the processor is not directly connected to the input of the crossbar switch; rather, the processor is connected through a special function register (SFR) via an SFR bus to each of the modules to provide control information thereto, data thereto (or receive data therefrom), etc. Each of the functional modules therefore is interfaced on the input or output thereof with the processor, wherein the processor can provide data thereto or receive data therefrom or provide configuration information thereto in the form of controls, such as to the timer. Thus, the language in the claim "said processing port to interface *with* said plurality of input/output pins" refers to the fact that the processor interfaces with the functional module wherein the functional input/output blocks are interfaced to the pins through the ports. The Examiner had stated that any of the functional modules could be a processor. However, if one were a processor, it could not interface with a functional module other than through the switch. Thus, the functional modules are not disposed between the processor and the switch. As such, Applicant believes that the *Cheung et al.* patent, taken by itself does not obviate or anticipate Applicant's present inventive concept. The Examiner has provided the *Allen et al.* reference as providing the necessary disclosure for combination with the *Cheung et al.* reference. However, the *Allen et al.* reference is a reference that, as described hereinbefore, provides a fixed relationship between the processor and the pins and there is no pin configuration disclosed nor suggested. Therefore, Applicant believes that the combination of *Cheung et al.* and *Allen et al.* do not provide in combination sufficient teachings to rise to the level of obviating references, as a functional module arguably functioning as a processor (noting that Applicants do no necessarily agree that

*Cheung et al.* provides sufficient disclosure to make such an assumption) is not disposed such that it will allow the functional module to interface between the processor and the switch. Therefore, Applicant respectfully requests the withdrawal of the 35 U.S.C. §103(a) rejection in view of *Cheung et al.* and *Allen et al.*

Applicant has now made an earnest attempt in order to place this case in condition for allowance. For the reasons stated above, Applicant respectfully request full allowance of the claims as amended. Please charge any additional fees or deficiencies in fees or credit any overpayment to Deposit Account No. 20-0780/CYGL-25,768 of HOWISON & ARNOTT, L.L.P.

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